

AMENDMENTS TO THE CLAIMS

Claims 1 to 23 (Canceled)

24. (Withdrawn) A phosphor of SiC excited by an external light source for emitting light, doped with N and at least one of B and Al.

25. (Withdrawn) The phosphor of SiC according to claim 24, wherein both of the doping concentration with at least one of B and Al and the doping concentration with N are $10^{15}/\text{cm}^3$ to $10^{20}/\text{cm}^3$.

26. (Withdrawn) The phosphor of SiC according to claim 25, wherein both of the doping concentration with at least one of B and Al and the doping concentration with N are $10^{16}/\text{cm}^3$ to $10^{20}/\text{cm}^3$.

27. (Withdrawn) The phosphor of SiC according to claim 24, emitting fluorescence having a wavelength of 500 nm to 750 nm with a peak wavelength in the range of 500 nm to 650 nm.

28. (Withdrawn) The phosphor of SiC according to claim 27, wherein SiC is doped with N and B, the concentration of either N or B is $10^{15}/\text{cm}^3$ to $10^{18}/\text{cm}^3$, and the concentration of either B or N is $10^{16}/\text{cm}^3$ to $10^{19}/\text{cm}^3$.

29. (Withdrawn) The phosphor of SiC according to claim 24, emitting fluorescence having a wavelength of 400 nm to 750 nm with a peak wavelength in the range of 400 nm to 550 nm.

30. (Withdrawn) The phosphor of SiC according to claim 29, wherein
SiC is doped with N and Al, the concentration of either N or Al is $10^{15}/\text{cm}^3$ to $10^{18}/\text{cm}^3$, and the concentration of either Al or N is $10^{16}/\text{cm}^3$ to $10^{19}/\text{cm}^3$.

31. (Withdrawn) A method of manufacturing a phosphor of SiC excited by an external light source for emitting fluorescence having a wavelength of 500 nm to 750 nm with a peak wavelength in the range of 500 nm to 650 nm and doped with N and B so that the concentration of either N or B is $10^{15}/\text{cm}^3$ to $10^{18}/\text{cm}^3$ and the concentration of either B or N is $10^{16}/\text{cm}^3$ to $10^{19}/\text{cm}^3$,

by forming an SiC crystal by sublimation recrystallization with a B source of LaB₆, B₄C, TaB₂, NbB₂, ZrB₂, HfB₂, BN or carbon containing B.

32. (Withdrawn) The method of manufacturing a phosphor of SiC according to claim 31, performing thermal annealing at a temperature of at least 1300°C for at least one hour after sublimation recrystallization or thermal diffusion.

33. (Withdrawn) A method of manufacturing a phosphor of SiC excited by an external light source for emitting fluorescence having a wavelength of 500 nm to 750 nm with a peak

wavelength in the range of 500 nm to 650 nm and doped with N and B so that the concentration of either N or B is $10^{15}/\text{cm}^3$ to $10^{18}/\text{cm}^3$ and the concentration of either B or N is $10^{16}/\text{cm}^3$ to $10^{19}/\text{cm}^3$,

by thermally diffusing a B source of simple B, LaB_6 , B_4C , TaB_2 , NbB_2 , ZrB_2 , HfB_2 or BN into SiC under a vacuum or an inert gas atmosphere at a temperature of at least 1500°C .

34. (Withdrawn) The method of manufacturing a phosphor of SiC according to claim 33, performing thermal annealing at a temperature of at least 1300°C for at least one hour after sublimation recrystallization or thermal diffusion.

35. (Withdrawn) The method of manufacturing a phosphor of SiC according to claim 33, removing a surface layer after thermal diffusion.

36. (Withdrawn) A substrate for a semiconductor consisting of a 6H-SiC single-crystalline phosphor excited by an external light source for emitting light and doped with N and at least one of B and Al.

37. (Withdrawn) The substrate for a semiconductor according to claim 36, consisting of a 6H-SiC single-crystalline phosphor doped with N and B for emitting fluorescence having a wavelength of 500 nm to 750 nm with a peak wavelength in the range of 500 nm to 650 nm.

38. (Withdrawn) The substrate for a semiconductor according to claim 36, consisting of a 6H-SiC single-crystalline phosphor doped with N and Al for emitting fluorescence having a wavelength of 400 nm to 750 nm with a peak wavelength in the range of 400 nm to 550 nm.

39. (Withdrawn) A method of manufacturing a substrate for a semiconductor consisting of a 6H-SiC single-crystalline phosphor excited by an external light source for emitting fluorescence having a wavelength of 500 nm to 750 nm with a peak wavelength in the range of 500 nm to 650 nm and doped with N and B so that the concentration of either N or B is $10^{15}/\text{cm}^3$ to $10^{18}/\text{cm}^3$ and the concentration of either B or N is $10^{16}/\text{cm}^3$ to $10^{19}/\text{cm}^3$, comprising the steps of:

thermally diffusing a B source of simple B, LaB_6 , B_4C , TaB_2 , NbB_2 , ZrB_2 , HfB_2 or BN into SiC under a vacuum or an inert gas atmosphere at a temperature of at least 1500°C ; and removing a surface layer.

40. (Withdrawn) The method of manufacturing a substrate for a semiconductor according to claim 39, performing thermal annealing at a temperature of at least 1300°C after sublimation recrystallization or thermal diffusion.

41. (Withdrawn) A method of manufacturing a substrate for a semiconductor consisting of a 6H-SiC single-crystalline phosphor excited by an external light source for emitting fluorescence having a wavelength of 500 nm to 750 nm with a peak wavelength in the range of

500 nm to 650 nm and doped with N and B so that the concentration of either N or B is $10^{15}/\text{cm}^3$ to $10^{18}/\text{cm}^3$ and the concentration of either B or N is $10^{16}/\text{cm}^3$ to $10^{19}/\text{cm}^3$, wherein

atmosphere gas in crystal growth contains N_2 gas of 1 % to 30 % in gas partial pressure, and raw material SiC contains 0.05 mol % to 15 mol % of a B source, and an SiC crystal is formed by sublimation recrystallization.

42. (Withdrawn) The method of manufacturing a substrate for a semiconductor according to claim 41, performing thermal annealing at a temperature of at least 1300°C after sublimation recrystallization or thermal diffusion.

43. (Withdrawn) Powder for a semiconductor consisting of a 6H-SiC single-crystalline phosphor excited by an external light source for emitting fluorescence having a wavelength of 500 nm to 750 nm with a peak wavelength in the range of 500 nm to 650 nm, having a particle diameter of $2\text{ }\mu\text{m}$ to $10\text{ }\mu\text{m}$ and a central particle diameter of $3\text{ }\mu\text{m}$ to $6\text{ }\mu\text{m}$.

44. (Currently Amended) A light-emitting ~~diode~~ apparatus comprising a substrate for a semiconductor consisting of a 6H-SiC single-crystalline phosphor doped with N and at least one of B and Al and a light-emitting device of a nitride semiconductor formed on said substrate.

45. (Currently Amended) The light-emitting ~~diode~~ apparatus according to claim 44, wherein

the emission wavelength of said light-emitting device of a nitride semiconductor is not more than 408 nm.

46. **(Currently Amended)** The light-emitting-~~diode~~ apparatus according to claim 44, wherein

both of the doping concentration with at least one of B and Al and the doping concentration with N in said 6H-SiC single-crystalline phosphor are $10^{16}/\text{cm}^3$ to $10^{19}/\text{cm}^3$.

47. **(Currently Amended)** The light-emitting-~~diode~~ apparatus according to claim 46, wherein

both of the doping concentration with at least one of B and Al and the doping concentration with N in said 6H-SiC single-crystalline phosphor are $10^{17}/\text{cm}^3$ to $10^{19}/\text{cm}^3$.

48. **(Currently Amended)** A light-emitting-~~diode~~ apparatus having one or at least two layers consisting of a 6H-SiC single-crystalline phosphor doped with N and at least one of B and Al on a substrate of SiC for a semiconductor and comprising a light-emitting device of a nitride semiconductor on said 6H-SiC single-crystalline phosphor layer(s).

49. **(Currently Amended)** The light-emitting-~~diode~~ apparatus according to claim 48, wherein

the emission wavelength of said light-emitting device of a nitride semiconductor is not more than 408 nm.

50. **(Currently Amended)** The light-emitting-diode apparatus according to claim 48, wherein

both of the doping concentration with at least one of B and Al and the doping concentration with N in said 6H-SiC single-crystalline phosphor are $10^{16}/\text{cm}^3$ to $10^{19}/\text{cm}^3$.

51. **(Currently Amended)** The light-emitting-diode apparatus according to claim 50, wherein

both of the doping concentration with at least one of B and Al and the doping concentration with N in said 6H-SiC single-crystalline phosphor are $10^{17}/\text{cm}^3$ to $10^{19}/\text{cm}^3$.